



IC ICM C07C317-44  
 ICS C07C255-17; C07C255-65; C07C255-27; C07C255-05; C07C255-35;  
 C08B220-44; C07C255-31; C08G065-48; C08G073-06; C08G077-44;  
 C08G073-02; C07F017-02; C07F007-18; C07C311-02; C09K003-00;  
 H01M006-16; H01M010-40; C07B041-00; C08F004-00  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 23, 40, 67  
 IT Battery electrolytes  
 (malononitrile derivative salts as battery electrolytes)  
 IT Acid-base indicators  
 (malononitrile derivative salts as pH indicators in nonaq.  
 solvents)  
 IT Polyelectrolytes  
 (malononitrile derivative salts as polymeric electrolytes)  
 IT 1120-71-4, 1,3-Propanesultone  
 (reaction with lithiated phenazine and malononitrile K salt)  
 IT 67-42-5 81-88-9, Rhodamine B 112-76-5, Stearoyl chloride  
 401-99-0, 1,3-Dinitro-5-(trifluoromethyl)benzene 553-90-2,  
 Dimethyl oxalate 700-16-3, Pentafluoropyridine 38870-89-2,  
 Methoxyacetyl chloride 40724-67-2 53188-07-1, Trolox 56512-49-3  
 86688-96-2, 1H-Pyrrole-3-acetic acid 210043-94-0  
 (reaction with malononitrile K salt)

OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS  
 RECORD (9 CITINGS)  
 REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L87 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 1997:505252 HCAPLUS Full-text  
 DOCUMENT NUMBER: 127:193073  
 ORIGINAL REFERENCE NO.: 127:37405a,37408a  
 TITLE: Secondary nonaqueous electrolyte  
 batteries with oxalate ester containing  
 electrolyte solvents  
 INVENTOR(S): Yamahira, Takayuki  
 PATENT ASSIGNEE(S): Sony Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09199172	A	19970731	JP 1996-26160	19960118
			<--	
PRIORITY APPLN. INFO.:			JP 1996-26160	19960118
			<--	

ED Entered SIN: 09 Aug 1997  
 AB The batteries use Li containing oxide cathodes, Li intercalating carbonaceous  
 anode, and a Li salt electrolyte dissolved in a nonaq. solvent; where the  
 solvent contains diesters of oxalic acid. The esters are selected from di-Me

oxalate, di-ET oxalate, di-Pr oxalate, di-iso-Pr oxalate, Et Me oxalate, Me Pr oxalate, and Et Pr oxalate. These batteries have high voltage and good cycling performance at heavy loads.

- IT 95-92-1, Diethyl oxalate 553-90-2, Dimethyl oxalate 615-52-1 615-81-6, Di-iso-propyl oxalate 615-98-5, Dipropyl oxalate 26404-21-7, Methyl propyl oxalate 26404-25-1, Ethyl propyl oxalate (solvent mixts. containing diesters of oxalic acid for lithium hexafluorophosphate in secondary lithium batteries)
- RN 95-92-1 HCAPLUS
- CN Ethanedioic acid, 1,2-diethyl ester (CA INDEX NAME)



- RN 553-90-2 HCAPLUS
- CN Ethanedioic acid, 1,2-dimethyl ester (CA INDEX NAME)



- RN 615-52-1 HCAPLUS
- CN Ethanedioic acid, 1-ethyl 2-methyl ester (CA INDEX NAME)



- RN 615-81-6 HCAPLUS
- CN Ethanedioic acid, 1,2-bis(1-methylethyl) ester (CA INDEX NAME)



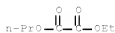
- RN 615-98-5 HCAPLUS
- CN Ethanedioic acid, 1,2-dipropyl ester (CA INDEX NAME)



RN 26404-21-7 HCAPLUS  
 CN Ethanedioic acid, 1-methyl 2-propyl ester (CA INDEX NAME)



RN 26404-25-1 HCAPLUS  
 CN Ethanedioic acid, 1-ethyl 2-propyl ester (CA INDEX NAME)



IC ICM H01M010-40  
 ICS H01M004-58  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 ST lithium battery electrolyte oxalic acid diester  
 IT Battery electrolytes  
     (solvent mixts. containing diesters of oxalic acid for lithium  
     hexafluorophosphate in secondary lithium batteries)  
 IT 95-92-1, Diethyl oxalate 96-49-1, Ethylene carbonate  
 108-32-7, Propylene carbonate 553-90-2, Dimethyl oxalate  
 615-52-1 615-81-6, Di-iso-propyl oxalate  
 615-98-5, Dipropyl oxalate 21324-40-3, Lithium  
 hexafluorophosphate 26404-21-7, Methyl propyl oxalate  
 26404-25-1, Ethyl propyl oxalate  
     (solvent mixts. containing diesters of oxalic acid for lithium  
     hexafluorophosphate in secondary lithium batteries)  
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
 RECORD (1 CITINGS)

L87 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 1997:101100 HCAPLUS Full-text  
 DOCUMENT NUMBER: 126:106586  
 ORIGINAL REFERENCE NO.: 126:20539a,20542a  
 TITLE: Nonaqueous electrolyte  
     batteries having reactive additives in  
     electrolytes  
 INVENTOR(S): Jinno, Maruo; Uehara, Mayumi; Sakurai, Atsushi;  
 Nishio, Koji; Saito, Toshihiko  
 PATENT ASSIGNEE(S): Sanyo Denki Kk, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
     CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08321311	A	19961203	JP 1995-150843	19950524
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PRIORITY APPLN. INFO.:			JP 1995-150843	19950524